



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/804,981	03/13/2001	Derek D. Mahoney	2506.2020-001	9360

21005 7590 02/11/2004

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.  
530 VIRGINIA ROAD  
P.O. BOX 9133  
CONCORD, MA 01742-9133

EXAMINER

LE, HUYEN D

ART UNIT	PAPER NUMBER
----------	--------------

2643

DATE MAILED: 02/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/804,981

Applicant(s)

MAHONEY ET AL.

Examiner

HUYEN D. LE

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6 and 8.                      6) ☐ Other: \_\_\_\_\_

Art Unit: 2643

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 23-44 are rejected under 35 U.S.C. 102(b) as being anticipated by Shennib (U.S. patent 5,701,348).

Regarding claims 1, 23, 25, 27, 35 and 37, as broadly claimed, Shennib teaches a method and apparatus of a flexible tip (40, see page 9, and figures 3-5, 12-14, 19, 20, 23, 29-30 and 32) that has a mushroom shaped tip (80, 90, 190) and an inner portion as claimed (figures 3, 4, 10-14 and 18). As shown in the drawings, the inner portion defines a bore having a proximal end, a distal end and for receiving a receiver (41) as claimed.

Regarding claim 24, as broadly claimed, the amount of power required by the receiver of the Shennib device is decreased since the receiver (41) mounted within the hearing aid tip (40) is positioned adjacent to the user's eardrum within the user's auditory canal (see col. 4, lines 48-49 and lines 63-67 and also see page 4, lines 2-6 in the specification).

Regarding claims 26 and 36, Shennib teaches a sealing layer as claimed (figures 10-11, 15-17, page 7, lines 6-8 and page 9, lines 53-60).

Regarding claims 28, 33, 38 and 43, Shennib teaches a sealing layer as claimed (figures 15-17 and page 9, lines 53-60).

Regarding claims 29-32 and 39-42, Shennib shows a receiver housing and spring assembly as claimed (figures 3-5, 10-11 and 28).

Art Unit: 2643

Regarding claims 34 and 44, as broadly claimed, Shennib teaches the inner portion is formed of a first material (the semi-rigid tubing 71), and the tip is formed a second material as claimed (page 9, lines 24-26, 30-32, 45-46 and lines 61-63).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shennib et al. (U.S. patent 5,701,348).

Regarding claims 1, 23 (as interpreted in a different manner), 3, 10, 12 and 14, Shennib teaches a method and apparatus of a hearing aid that comprises a hearing aid base unit (12). The base unit has a housing (13), a microphone (14), a battery (15, 16), electronics (17) and a flexible tip (40 and page 9) as claimed, wherein the flexible tip (40) is connected to the base unit (12,

Art Unit: 2643

figures 3-5, 19, 20, 23, 29-30 and 32) and has an inner portion (figures 3, 4, 10, 11, 18). As shown in the drawings, the inner portion defines a bore having a proximal end, a distal end and for receiving a receiver (41) as claimed.

Shennib does not specifically disclose that the flexible tip (40) has a mushroom shaped tip as claimed. However, the examiner takes the Office Notice that providing a mushroom shape for the ear tip is very well-known in the art.

Since Shennib does not restrict to any shape for the flexible ear tip (40), it therefore would have been obvious to one skilled in the art to provide any shape for the tip of the Shennib device such as a mushroom for better sealing and better conforming to the shape of the ear.

Regarding claims 2 and 13, Shennib teaches a sealing layer as claimed (figures 10-11, 15-17, page 7, lines 6-8 and page 9, lines 53-60).

Regarding claims 4, 9, 15, and 20, Shennib teaches a sealing layer as claimed (figures 15-17 and page 9, lines 53-60).

Regarding claims 5-8 and 16-19, Shennib shows a receiver housing and spring assembly as claimed (figures 3-5, 10-11 and 28).

Regarding claims 11 and 22, as broadly claimed, Shennib teaches the inner portion is formed of a first material (the semi-rigid tubing 71), and the tip is formed a second material (page 9, lines 24-26, 30-32, 45-46 and lines 61-63).

Regarding claim 21, as broadly claimed, Shennib teaches the inner portion and the tip that are formed of a compliant material (page 9, lines 24-26, 30-32, 45-46 and lines 61-63).

Regarding claim 24, as interpreted in a different manner, Shennib does not specifically disclose the method that comprises the decreasing the amount of power as claimed. However,

Art Unit: 2643

Shennib does teach that the receiver module is inserted deeply into the ear canal for providing the advantage of improved energy efficiency.

Therefore, it would have been obvious to one skilled in the art to provide the amount of power of the Shennib device to be decreased for the improved energy efficiency (col. 4, lines 63-66) and better fitting and comfort to the user's ear canal.

### *Conclusion*

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUYEN D. LE whose telephone number is (703)305-4844. The examiner can normally be reached on 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CURTIS KUNTZ can be reached on (703) 305-4708. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-5631.



HL  
February 6, 2004



HUYEN LE  
PRIMARY EXAMINER